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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,722	08/29/2003	Shouichi Hoshi	D-1490	7718

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EXAMINER

SHARP, JEFFREY ANDREW

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/650,722	Applicant(s) HOSHI, SHOUICHI	
	Examiner Jeffrey Sharp	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Status of Claims

[1] Claims 1-7 are pending.

Specification

[2] The disclosure is objected to because of minor informalities. A few examples are:

Paragraph 0007, last line word 'project' should be 'projection'


Paragraph 0012, states '*one of the pressing head portion of the male part and the head portion of the female part*'. This language is cumbersome, as it is not clear whether Applicant meant '*formed on either the pressing head portion of the male part, or the head portion of the female part*'.

Paragraph 0013, lines 4-6 it is unclear what '*portion*' refers to.

Applicant is advised to proofread the specification for typos and/or cumbersome language that may have occurred through translation.

Appropriate correction is required.

Claim Objections

 [3] Claims ⁴~~1~~ and ^{5 are}~~4~~ objected to because of the following informalities:

3/ ~~Claim 1, second line three, does it read 'one of the pressing head portions' or 'one of the pressing head portions of the male part, or the head portion of the female part'.~~

Claim 4, line 2 states '*one of...the portion*'. It is not clear whether a plurality of pressing head portions exists. It is not clear whether Applicant meant '*formed on either the pressing head portion of the male part, or the head portion of the female part*'.

Claim 5, line three '*insertion leg*' is different than '*inserting leg*' in claim 1 line 9. Clear antecedent basis is needed. Also, it is to be noted that '*projection*' of claim 4 may be misinterpreted as the '*engaging projection*' on the female part. A new name for the projection on the second engaging member may be helpful for clarity (such as '*second engaging projection*'), but it is not necessary as long as the two limitations '*engaging projection*' and '*projection*' are used clearly in context.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

[4] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[5] Claim 1, 2, and 5 rejected under 35 U.S.C. 102(b) as being anticipated by Meyer US-5,775,860.

Meyer teaches:

A female part (14) comprising:

- a head portion (16),
- leg portion (20,24),
- inner space (28),
- flexible outward engaging projection (22),

A male part (12) comprising:

- a head portion (38),
- inserting leg (40, 44),
- first outward engaging portion (46) near the forward end (42)
 - which engages an inner wall of the female part (62, 30),
- second outward engaging portion (52) near the base end (near 50)
 - which is disposed in the inner wall (area 62) upon full insertion.

As for claim 2, the second outward engaging portion (52) is located behind the flexible outward engaging projection (22) of the female part (14). When the male part (12) is completely inserted into the female part (14), engaging projection (52) is disposed in the inner wall (62) of the female part (14), and may prevent the engaging projection (22) from bending inwardly (via. a 'wedging effect'). First outward engaging portion (46) co-operates with the second engaging

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portion (52) to help with this function. Applicant is reminded that functional claim language that does not significantly limit the claimed structure is considered intended use.

As for claim 5, the second engaging portion (52) of the male part includes a projection (triangular barb) formed on the outer surface of the insertion leg (40), and there is an empty space (48) for allowing the projection to bend elastically inward.

Claim Rejections - 35 USC § 103

[6] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[7] Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer US-5,775,860 as discussed above in view of Ohkawa et al. US-4,927,287.

Meyer teaches all of the limitations of the instant claim 1 as discussed above.

However, Meyer fails to disclose expressly, the bending strength of the second engaging portion greater than that of the engaging projection.

Ohkawa et al. shows in Figure 12, the engaging projection (17) having greater bending strength (i.e., cantilevered or deflective force) against the engaging projection.

At the time of invention, it would have been an obvious matter of design choice, to 'beef up' the second engaging portion taught by Meyer, such that the bending strength is greater than the engaging projection of the female member, in order to allow the second engaging portion to

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fully expand the engaging projections and/or female part's leg portion against the gap residing between the female part and attaching hole (via bending), without having said second engaging portion break from overstress.

[8] Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer US-5,775,860 as discussed above in view of JP 2002-106519.

Meyer teaches all of the limitations of the instant claim 1 as discussed above.

However, Meyer fails to disclose expressly a maintaining engagement portion disposed on either the head portion of the female part or the pressing head portion of the male part, such that the male and female parts are permanently fixed to each other in a completely inserted state.

The JP 2002-106519 reference teaches a maintaining engagement portion (6,16) disposed on either the head portion of the female part or the pressing head portion of the male part, such that the male and female parts are permanently fixed to each other in a completely inserted state. Refer to Figures 29-31.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify either or both the head portion of the female part and/or the pressing head portion of the male part taught by Meyer, to comprise the maintaining engagement portion suggested by the JP 2002-106519 reference, in order to provide additional locking/securing means between the two parts to keep them from separating.

(See also, Kawai et al. US-2004/0136812 which claims priority to 12 days after Applicant's claimed priority date and shows maintaining engagement portion (17) to hold a pressing head portion (10))

[9] Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer US-5,775,860 as discussed above in view of Morel US-4,276,806.

Meyer teaches all of the limitations of the instant claim 1 as discussed above, and also shows what could be considered a cutout portion (fillet 30, 28) that forms the engaging projection (22).

However, Meyer fails to disclose expressly a cutout portion to define a peripheral boundary of the engaging projection of the female member, and the first engaging portion to be located in such a cutout portion.

Morel teaches a cutout portion (slots 12) on a female member (B) that defines an engaging projection (10,11). The engagement projection (10,11) is similarly used to temporarily fix the female member (B) to an attaching hole (14) of an element to be fastened (C). The first engaging portion (4) is located in the cutout portion (slots 12). See Morel Col 3 lines 3-9.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the female fastener of the connector taught by Meyer, to comprise the cutout portion taught by Morel, in order to serve as 1) anti-rotational means, 2) guide means, and or 3) to create an inherent back stop (Morel element 13) for the first engaging portion (Morel element 4), to prevent the male part (Morel element A) from being displaced from the female part (Morel element B) in a temporary engaging state well-known in the art.

[10] Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer US-5,775,860 in view of Morel US-4,276,806 as discussed above, in even further view of Benoit et al. US-6,179,539 or Ohkawa et al US-4,927,287.

Meyer v. Morel teaches all of the limitations of the instant claim 6.

However, Meyer v. Morel fails to disclose expressly the second engaging portion of the male part to be engaging an edge of the female part in the temporary engaging state.

Both Benoit et al. (Figures 8-14) and Ohkawa et al. (Figures 7-13) teach a second engaging portion touching an edge of the female part in a temporary engaging state.

Ohkawa et al. suggest a second engaging portion (17) of a male member (7) making contact with the female member (1) in a temporary engaging state. It is to be noted as supporting evidence of obviousness, that the female part shown by Ohkawa et al. could easily contain a flexible outward engaging projection so as to be advantageously held within an attaching hole without the presence of a male part as shown by Kubogochi et al. US-4,952,106.

Benoit et al. suggest a second engaging portion (80,82) of a male member (30) making contact with the female member (70) in a temporary engaging state. It is to be noted as supporting evidence of obviousness, that the female part shown by Benoit et al. could easily be designed to fit within an attaching hole such as element (3) disclosed in JP 62-166309 as an alternate means of assembly. Additionally, Benoit et al. show a first engaging portion (74,76) on a forward end of the insertion leg (72).

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the connector taught by Meyer v. Morel, so that the first and second engaging portions

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interact as taught by either Benoit et al. or Ohkawa et al., in order to provide a better frictional lock between the male and female parts.

Conclusion

[11] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

JP 62-166309		
US 3918130 A	USPAT	Poe; L. Richard
US 4114509 A	USPAT	Poe; L. Richard
US 4874276 A	USPAT	Iguchi; Tatsuya
US 5143500 A	USPAT	Schuring; Eric J. et al.
US 5163795 A	USPAT	Benoit; Thomas A. et al.
US 5651632 A	USPAT	Gordon; Gary
US 6364586 B1	USPAT	Okada; Shigeo
US 6431585 B1	USPAT	Rickabus; Ted R. et al.
US 20040091334 A1	US-PGPUB	Hoshi, Shouichi
US 20040136812 A1	US-PGPUB	Kawai, Yasuhiro et al.
US 20040175250 A1	US-PGPUB	Yoneoka, Akira
US 6533515 B2	USPAT	Meyer; Charles P.
US 4624585 A	USPAT	Nix; Richard A. et al.
US 6435790 B1	USPAT	Ichikawa; Kouji
US 4697948 A	USPAT	Fukuda; Moritoshi
US 5935170 A	USPAT	H.ang.kansson; Bo et al.
US 5718549 A	USPAT	Noda; Yusuke et al.
US 5448809 A	USPAT	Kraus; Willibald
US 5322402 A	USPAT	Inoue; Shoji
US 4952106 A	USPAT	Kubogochi; Hisasi et al.
US 4927306 A	USPAT	Sato; Seiichi
US 4865505 A	USPAT	Okada; Shigeo
US 4506419 A	USPAT	Mitomi; Seiji
US 4770583 A	USPAT	Lindberg; Soren
US 3871430 A	USPAT	Meyer; Engelbert A.
US 3415155 A	USPAT	RIDDELL EDWIN O et al.
US 20040181917 A1	US-PGPUB	Sawatani, Seiji
US 20040163218 A1	US-PGPUB	Yuta, Kiyoteru et al.
US 6665914 B2	USPAT	Ogawa; Atsushi

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[12] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is (703) 305-0426. The examiner can normally be reached on 7:30 am - 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAS



**ROBERT J. SANDY
PRIMARY EXAMINER**